

Tonicity and Osmosis Summary

Tonicity: Relative solute concentration between two solutions.

- Hypertonic - more dissolved solutes than another solution
- Isotonic - the same amount of dissolved solutes as another solution
- Hypotonic - less dissolved solutes than another solution

A solution is not hypertonic, isotonic or hypotonic by itself; it must be compared to some other solution.

Tonicity refers to the amount of solute not the amount of water.

Osmosis is the diffusion of water through a semi-permeable membrane.

Water moves from an area of higher concentration to an area of lower concentration via osmosis.

Water always moves toward the more hypertonic region.

Solution	Cell	Direction of water movement	Cell mass
Hypertonic	Hypotonic	Out of cell	Decreases
Hypotonic	Hypertonic	Into the cell	Increases
Isotonic	Isotonic	Into <i>and</i> out of the cell	No net change